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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,104	05/16/2005	Michael Heckmeier	MERCK-3016	3575

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EXAMINER

FANG, JERRY C

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/535,104

Applicant(s)

HECKMEIER ET AL.

Examiner

Jerry Fang

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 22-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 13-21 is/are rejected.
- 7) ☒ Claim(s) 5 and 10-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/16/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Detailed Action.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-21 in the reply filed on 10/23/2006 is acknowledged. The traversal is on the ground(s) that additional search in class 435, sub-class 325 wouldn't be an additional burden upon the examiner. This is not found persuasive because additional search in class 435, sub-class 325 would be an additional burden upon the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Saupe et al. (US 5,368,770).

Regarding claim 1, Saupe discloses a substrate or a plurality of substrates (Abstract), an electrode arrangement (Col. 1, Lines 39-52), an element or a plurality of elements for polarization of the light (Abstract) and a modulation medium, characterized in that the light modulation element is operated at the temperature at which the modulation medium in the unaddressed state is in an optically isotropic phase (Col. 2,

Lines 26-49) and the mesogenic modulation medium comprises a chiral component, component (A), which consists of one or more chiral compounds (Col. 3, Lines 44-55) and the mesogenic modulation medium is operated at the temperature at which the light modulation element has a blue phase or the mesogenic modulation medium is operated at the temperature at which the light modulation element is in the isotropic phase (Col. 2, Lines 26-49).

Regarding claim 2, Saupe discloses the electrode arrangement is able to generate an electric field having a significant component parallel to the surface of the mesogenic modulation medium (Col. 1, Lines 39-52).

Regarding claim 3, Saupe discloses the mesogenic modulation medium has a blue phase (Col. 2, Lines 26-49).

Regarding claims 4 and 9, Saupe discloses the mesogenic modulation medium comprises a chiral component, component (A), which consists of one or more chiral compounds (Col. 3, Lines 44-55).

Regarding claim 15, Saupe discloses an electro-optical display containing one or more light modulation element (Abstract).

Regarding claim 17, Saupe discloses an electro-optical display containing one or more electro-optical displays (Col. 1, Line 55 – Col. 2, Line 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 13-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saupe et al. (US 5,368,770).

Regarding claims 6-8 and 13-14, Saupe discloses the claimed invention except for the temperature range. It would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the appropriate temperature range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 18-21, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Mashm*, 2 USPQ2d 1647 (1987).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saupe et al. (US 5,368,770) as applied to claim 15 above, and further in view of Abileah et al. (US 5,629,784).

Regarding claim 16, a modified Saupe, as detailed in claim rejection 15 above, fails to disclose the display is addressed by means of an active matrix. Abileah discloses the display is addressed by means of an active matrix (Col. 1, Line 51 – Col. 2, Line 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to address the display by means of an active matrix as taught by Abileah, with the optical device of Saupe, since as shown by Abileah, an active matrix is commonly used to address a display in order to enhance the performance of a display.

Allowable Subject Matter

Claims 5 and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The allowable features being: the mesogenic modulation medium comprises an achiral component, component (B), which consists of one or more achiral compounds (claims 5 and 12); chiral compounds of component (A) have the same sign of the HTP at 20°C in the reference mixture (claim 10); the value of the HTP of one or more the chiral compounds of component (A) at 20°C in the reference mixture is $10\mu\text{m}^{-1}$ or more (claim 11).

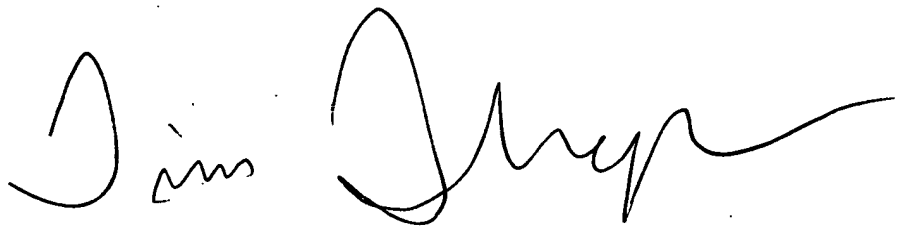
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Fang whose telephone number is 5712726013. The examiner can normally be reached on 10-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 5712722333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.F.
12/5/2006

A handwritten signature in black ink, appearing to read "Tim Thompson", with a stylized, flowing script.

TIMOTHY THOMPSON
PRIMARY EXAMINER